

ABSTRACT

A chemical sensor for detecting a reaction of  
a sensor material with a specimen on the basis of an  
5 intensity of a surface plasmon polariton wave  
propagated along a surface of a sensor medium  
including the sensor material is principally  
constituted by the sensor medium. The sensor medium  
includes a periodic structure and the sensor material  
10 disposed on the periodic structure. The periodic  
structure has a pitch substantially equal to an  
integral multiple of a wavelength of the surface  
plasma polariton wave generated by irradiating an  
interface between the periodic structure and the  
15 sensor material with light.

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